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A comparative study of the inducing effect of homoserine lactone and hexylresorcinol on phenotypic dissociation in bacteria

Margulis A., Kolpakov A., Il'inskaya O.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

It has been shown that the phenotypic dissociation of Bacillus subtilis SK1 and Salmonella typhimurium TA100 is induced by hexylresorcinol, an exogenous non-species-specific autoregulator of pleiotropic action, which is genotoxic for both pro- and eukaryotes. Nongenotoxic homoserine lactone, a chemical analogue of cell-density-responsive species-specific regulators, does not induce bacterial dissociation. The phage resistance of the S- and R-type variants of S. typhimurium TA100 induced by hexylresorcinol has been found to be the same as that of the S- and R-type salmonella variants obtained by the routine subculturing method. © Pleiades Publishing, Inc., 2006.

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Keywords

Adaptation, Hexylresorcinol, Homoserine lactone, Morphogenesis, Stress